

# Executive Office of Energy and Environmental Affairs

## Dam and Seawall Repair or Removal Fund

### Program Overview

2014

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Executive Office of Energy and Environmental Affairs





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The following presentation is offered for discussion purposes only and does not necessarily represent current statute, regulation, or policy positions of the Commonwealth of Massachusetts unless specifically acknowledged.

This presentation is not to be cited as a reference. Its purpose is to foster open and broad discussion of the issues as well as help assure public awareness of the discussions as of the date of the presentation.



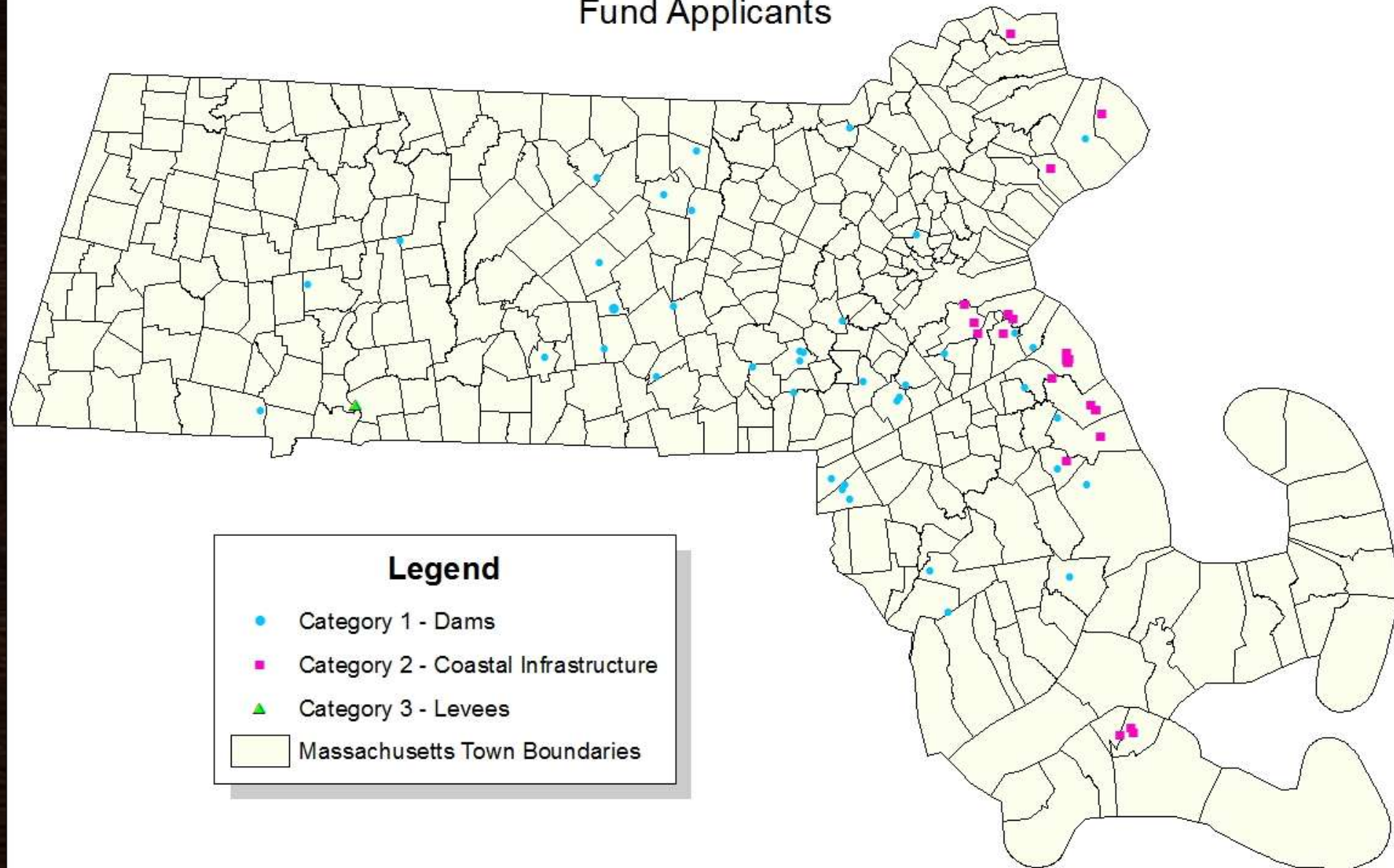
# Dam and Seawall Repair or Removal Fund FY 2014 Applications

| Application Category                     | Applications Received | Funds Requested | Matching Funds Offered<br>(cash and/or in-kind) |
|--|-----------------------|-----------------|---|
| Category 1: Dams and similar unregulated | 39                    | \$20,135,408.00 | \$6,507,040.00                                  |
| Category 2: Coastal                      | 23                    | \$49,827,810.24 | \$10,493,643.00                                 |
| Category 3: Levees and similar           | 1                     | \$730,000.00    | \$0.00  |
| Total                                    | 63                    | \$70,693,218.24 | \$17,000,683.00                                 |





## Fund Applicants



# Dam and Seawall Repair or Removal Fund FY 2014 Awards

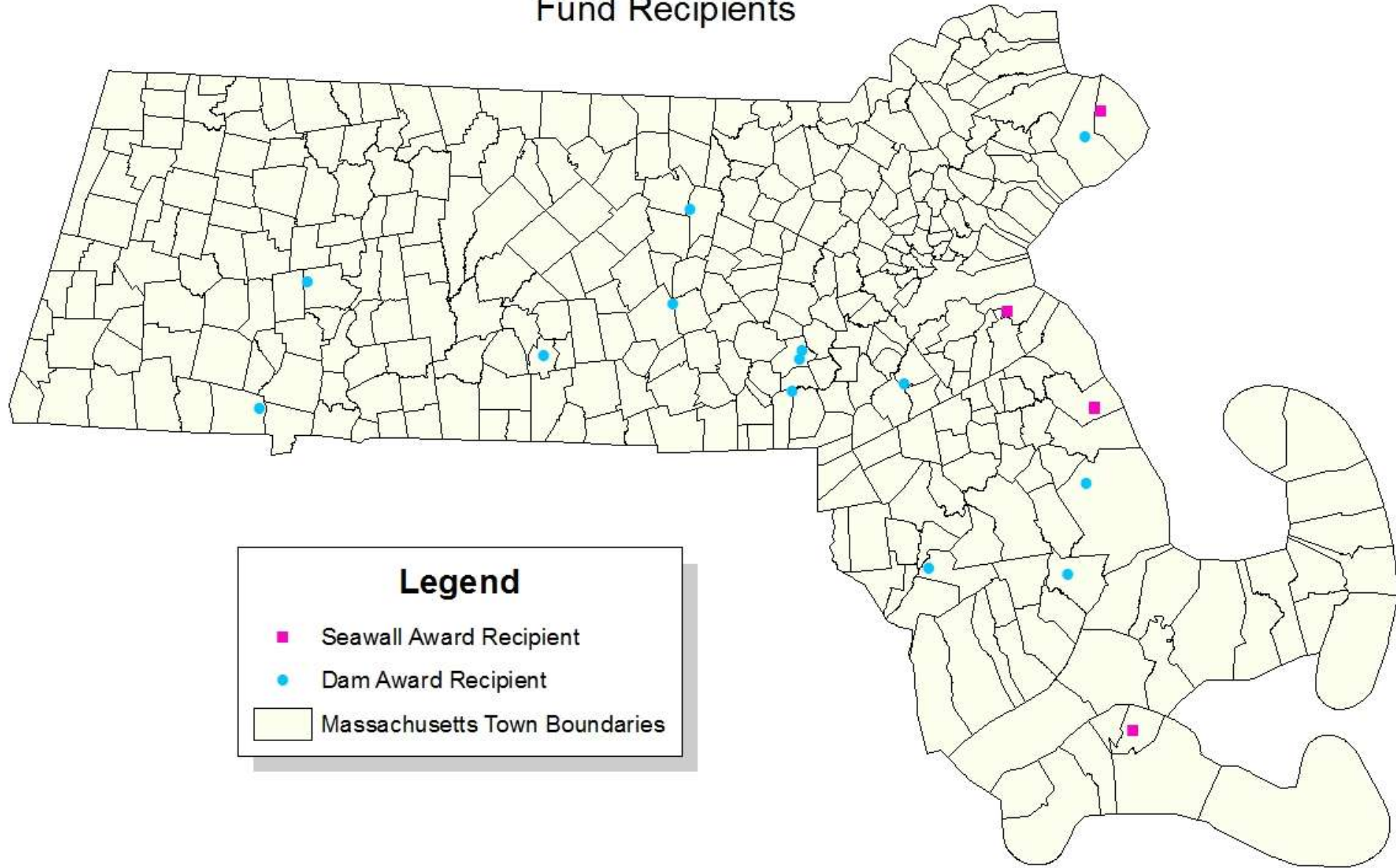
| Application Category                     | Projects Funded | Funds Provided  | Matching Funds Offered<br>(cash and/or in-kind) |
|--|-----------------|-----------------|---|
| Category 1: Dams and similar unregulated | 12              | \$5,942,061.00  | \$4,678,000.00                                  |
| Category 2: Coastal                      | 5               | \$8,296,000.00* | \$7,598,000.00                                  |
| Category 3: Levees and similar           | 0               | \$0.00          | \$0.00  |
| Total                                    | 17              | \$13,500,000.00 | \$12,276,000.00                                 |



These funds awarded from the environmental Bond, NOT the Fund



## Fund Recipients



# Dam and Seawall Repair or Removal Fund

## FY 2014 Awards – Category 1

| Applicant   | Funds Requested | Outside funds leveraged | Recommended Award – Category 1 |                |
|-------------|-----------------|-------------------------|--------------------------------|----------------|
|             |                 |                         | Grant                          | Loan           |
| Plymouth    | \$730,743.00    | \$636,000.00            | \$0.00                         | \$730,743.00   |
| Lancaster   | \$116,000.00    | \$86,000.00             | \$0.00                         | \$116,000.00   |
| Westfield   | \$1,000,000.00  | \$0.00                  | \$0.00                         | \$1,000,000.00 |
| Worcester   | \$240,000.00    | \$740,000.00            | \$240,000.00                   | \$0.00         |
| Brookfield  | \$179,949.00    | \$66,942.00             | \$6,750.00                     | \$173,199.00   |
| Northampton | \$75,000.00     | \$161,000.00            | \$75,000.00                    | \$0.00         |
| Canton      | \$1,000,000.00  | \$1,000,000.00          | \$665,000.00                   | \$335,000.00   |
| Bellingham  | \$500,000.00    | \$700,000.00            | \$188,000.00                   | \$312,000.00   |
| Fall River  | \$46,474.00     | \$10,403.00             | \$46,474.00                    | \$0.00         |
| Wareham     | \$1,000,000.00  | \$200,000.00            | \$164,995.00                   | \$835,000.00   |
| Gloucester  | \$1,000,000.00  | \$300,000.00            | \$146,400.00                   | \$854,000.00   |
| Holliston   | \$73,500.00     | \$28,000.00             | \$73,500.00                    | \$0.00         |
| Total       | \$5,961,666.00  | \$3,928,345.00          | \$1,606,119.00                 | \$4,335,942.00 |

# Dam and Seawall Repair or Removal Fund

## FY 2014 Awards – Category 2

| Applicant                | Funds Requested | Outside funds leveraged | Recommended Award |
|--------------------------|-----------------|-------------------------|-------------------|
| Oak Bluffs               | \$ 4,000,000.00 | \$ 0.00                 | \$ 3,600,000.00   |
| Hull                     | \$ 3,000,000.00 | \$ 0.00                 | \$ 2,750,000.00   |
| Rockport                 | \$ 14,000.00    | \$ 1,150,000.00         | \$ 14,000.00      |
| Marshfield-Hewitts South | \$ 506,000.00   | \$ 29,960.00            | \$ 488,000.00     |
| Marshfield-Hewitts North | \$ 790,000.00   | \$ 0.00                 | \$ 760,000.0      |
| Total                    | \$ 8,296.000.00 |                         | \$ 7,598,000.00   |



# Dam and Seawall Repair or Removal Fund

## Fund Objectives

### Public Safety

- Address the need to repair such structures where failure will likely cause loss of life
- Improve the protection of commercial and population centers, improve the protection of tax revenue generating structures, and/or enhance the protection of public owned infrastructure during significant coastal storm events and/or the impact of climate change
- Protect resources needed for first responders in the event of an emergency due to a coastal storm event

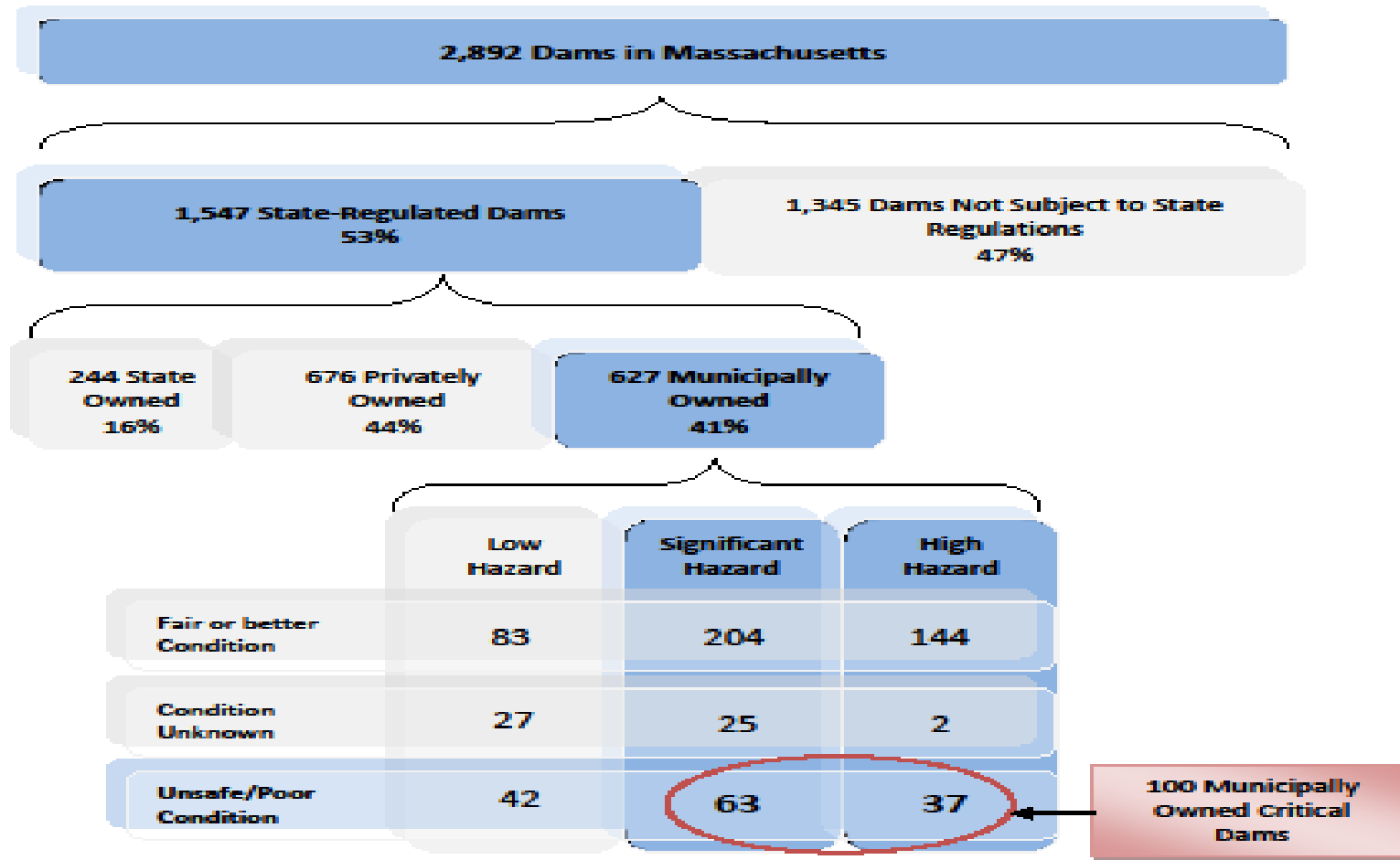


# Dam and Seawall Repair or Removal Fund

## Local Financial Impact Review Massachusetts Dam Safety Law

Auditor of the Commonwealth

**Figure 1: Identification of 100 Municipally Owned Critical Dams**



Source: <http://www.mass.gov/auditor/docs/dlm-municipal/dlmdamsafetyreport.pdf>



# Dam and Seawall Repair or Removal Fund

## Public Health

- Key infrastructure includes emergency preparedness and first-responder equipment and facilities; publicly owned health facilities; water/wastewater treatment facilities
- Improved water quality

## Environmental Health

- Water quality
- Improve natural resource and ecological values by employing/expanding the utilization of naturally occurring systems
- Address the hazards of climate change impacts, including coastal storm events





# Dam and Seawall Repair or Removal Fund

## What we Finance

- The more “shovel ready” the better
- Final Design
- Permitting
- Bid package preparation
- Construction costs

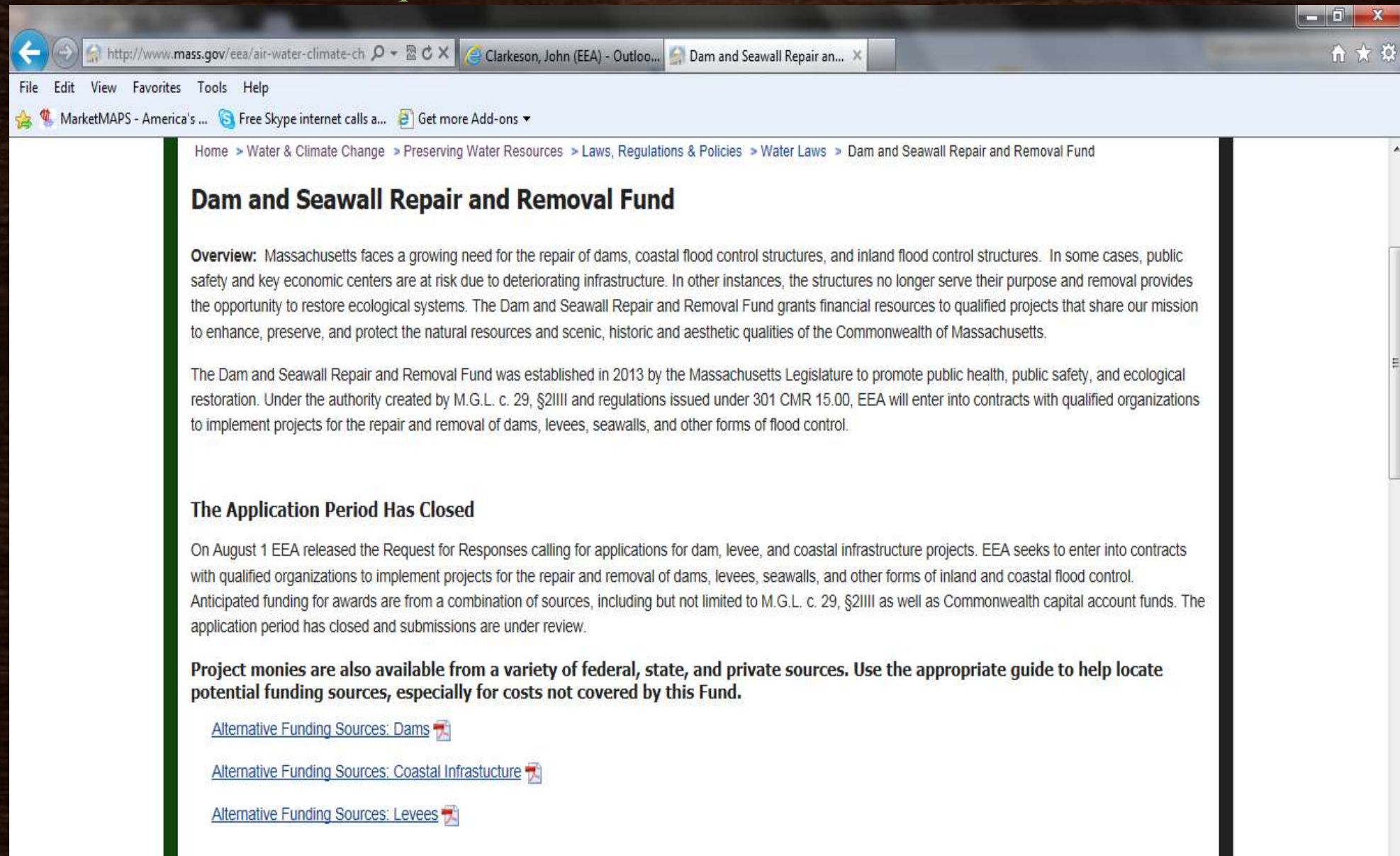
## What we don't!

- Feasibility studies
- Conceptual charrettes





Other sources of financing: <http://www.mass.gov/eea/air-water-climate-change/preserving-water-resources/water-laws-and-policies/water-laws/draft-reg-re-dam-and-sea-wall-repair-or-removal-fund.html>



Home > Water & Climate Change > Preserving Water Resources > Laws, Regulations & Policies > Water Laws > Dam and Seawall Repair and Removal Fund

## Dam and Seawall Repair and Removal Fund

**Overview:** Massachusetts faces a growing need for the repair of dams, coastal flood control structures, and inland flood control structures. In some cases, public safety and key economic centers are at risk due to deteriorating infrastructure. In other instances, the structures no longer serve their purpose and removal provides the opportunity to restore ecological systems. The Dam and Seawall Repair and Removal Fund grants financial resources to qualified projects that share our mission to enhance, preserve, and protect the natural resources and scenic, historic and aesthetic qualities of the Commonwealth of Massachusetts.

The Dam and Seawall Repair and Removal Fund was established in 2013 by the Massachusetts Legislature to promote public health, public safety, and ecological restoration. Under the authority created by M.G.L. c. 29, §21III and regulations issued under 301 CMR 15.00, EEA will enter into contracts with qualified organizations to implement projects for the repair and removal of dams, levees, seawalls, and other forms of flood control.

### The Application Period Has Closed

On August 1 EEA released the Request for Responses calling for applications for dam, levee, and coastal infrastructure projects. EEA seeks to enter into contracts with qualified organizations to implement projects for the repair and removal of dams, levees, seawalls, and other forms of inland and coastal flood control. Anticipated funding for awards are from a combination of sources, including but not limited to M.G.L. c. 29, §21III as well as Commonwealth capital account funds. The application period has closed and submissions are under review.

**Project monies are also available from a variety of federal, state, and private sources. Use the appropriate guide to help locate potential funding sources, especially for costs not covered by this Fund.**

[Alternative Funding Sources: Dams](#)

[Alternative Funding Sources: Coastal Infrastructure](#)

[Alternative Funding Sources: Levees](#)





# Dam and Seawall Repair or Removal Fund Finance Packages

## Finance Packages

- Most common award includes a combination of grant funds and loan financing
- Grants are awarded for final designs, permitting, and bid package preparation
- Loans are for construction costs
- Package structure is dependent upon applicant eligibility –
  - Municipal and Non-profit organizations may receive grant funds
  - Private owners of dams may only receive loans
  - Privately owned coastal structures are NOT eligible for funding – even if a municipality is the applicant.





# Dam and Seawall Repair or Removal Fund Loan Mechanics - Municipalities

- Contract is executed.
- Upon completion of certain key tasks, funds are released to an account established by the municipality at the Massachusetts Municipal Depository Trust (MMDT).
  - Permits are issued
  - General Obligation bond is executed (Municipality) – local authorization and opinion of local bond counsel must be secured.
- EEA is copied on all account statements of MMDT account
- Finance agreement represents a 20 year loan, payable semi-annually in equal amounts to EEA
- All construction costs/invoices are checked against statements from MMDT.
- If construction costs are less than anticipated, funds in MMDT account must be used to make remaining loan payments – *MMDT funds may NOT be used for other purposes.*



**APPENDIX F:**  
**SAMPLE REPAYMENT SCHEDULE**  
**HYPOTHETICAL \$100,000 LOAN AT 2% INTEREST**

Schedule of Loan Repayments (semi-annual) - Loan Amount: \$100,000.00

| <u>Payment Number</u> | <u>Date</u> | <u>Beginning Balance</u> | <u>Payment</u> | <u>Principal</u> | <u>Interest</u> | <u>Total</u> | <u>Total Due</u> | <u>Remaining Principal Balance</u> |
|-----------------------|-------------|--------------------------|----------------|------------------|-----------------|--------------|------------------|------------------------------------|
| 1                     | Jun-13      | \$ 100,000.00            | \$2,586.34     | \$2,419.67       | \$ 166.67       | \$2,586.34   | \$2,586.34       | \$ 97,580.33                       |
| 2                     | Jan-14      | \$ 97,580.33             | \$2,586.34     | \$2,423.71       | \$ 162.63       | \$2,586.34   | \$2,586.34       | \$ 95,156.62                       |
| 3                     | Jun-14      | \$ 95,156.62             | \$2,586.34     | \$2,427.75       | \$ 158.59       | \$2,586.34   | \$2,586.34       | \$ 92,728.87                       |
| 4                     | Jan-15      | \$ 92,728.87             | \$2,586.34     | \$2,431.79       | \$ 154.55       | \$2,586.34   | \$2,586.34       | \$ 90,297.08                       |
| 5                     | Jun-15      | \$ 90,297.08             | \$2,586.34     | \$2,435.85       | \$ 150.50       | \$2,586.34   | \$2,586.34       | \$ 87,861.23                       |
| 6                     | Jan-16      | \$ 87,861.23             | \$2,586.34     | \$2,439.91       | \$ 146.44       | \$2,586.34   | \$2,586.34       | \$ 85,421.33                       |
| 7                     | Jun-16      | \$ 85,421.33             | \$2,586.34     | \$2,443.97       | \$ 142.37       | \$2,586.34   | \$2,586.34       | \$ 82,977.35                       |
| 8                     | Jan-17      | \$ 82,977.35             | \$2,586.34     | \$2,448.05       | \$ 138.30       | \$2,586.34   | \$2,586.34       | \$ 80,529.31                       |
| 9                     | Jun-17      | \$ 80,529.31             | \$2,586.34     | \$2,452.13       | \$ 134.22       | \$2,586.34   | \$2,586.34       | \$ 78,077.18                       |
| 10                    | Jan-18      | \$ 78,077.18             | \$2,586.34     | \$2,456.21       | \$ 130.13       | \$2,586.34   | \$2,586.34       | \$ 75,620.97                       |
| 11                    | Jun-18      | \$ 75,620.97             | \$2,586.34     | \$2,460.31       | \$ 126.03       | \$2,586.34   | \$2,586.34       | \$ 73,160.66                       |



# Dam and Seawall Repair or Removal Fund Hypothetical \$1,000,000 Award

**2% Loan versus current market of 3.75%**

Assumptions: AA Rated, Municipality

**\$1,000,000.00 award**

- ✓ \$250,000 grant for final design/permitting
- ✓ \$750,000 loan for construction costs
- ✓ \$25,902.35 interest over 20 years versus \$49,021.05
- ✓ ~1.295% per year effective interest rate.

**Also - currently no administrative fee!**





# Dam and Seawall Repair or Removal Fund Application Priorities

Priorities are established under M.G.L. c. 29, §2III and subsequent regulations issued under 301 CMR 15.00:

- Structures that are owned or operated by cities, towns
- Structures that are owned or operated charitable organizations.
- Structure is identified in writing by the United States Army Corps of Engineers as requiring imminent improvement.
- Structure is owned by a water supply

## Regarding Coastal Structures:

Priority shall be given to those coastal flood or wave control structures rated in fair, poor or critical condition (C-F), and that have a moderate to high protection level (III-V) in accordance with *The Massachusetts Coastal Infrastructure Inventory and Assessment Project* (see [http://www.mass.gov/czm/stormsmart/resources/infrastructure/chc\\_inventory-summary\\_report\\_2009.pdf](http://www.mass.gov/czm/stormsmart/resources/infrastructure/chc_inventory-summary_report_2009.pdf)); or annual maintenance and monitoring reports have indicated a worsening condition or a licensed structural engineer has declared such.





# Dam and Seawall Repair or Removal Fund Application Preference Items

- Project results in improvement to public health and/or safety;
- Project results in protection of other public infrastructure;
- If a privately held structure, the applicant demonstrates that any private benefit is incidental to the public good.
- Design plan recognizes the potential impact of climate change and improves resilience;
- Completion of the project will improve/expand use of naturally occurring systems;
- **Does the project complement other efforts at ecological improvement/restoration?  
Is this project part of a larger effort and/or contribute to other efforts in the local watershed to improve the environmental condition?**





# Dam and Seawall Repair or Removal Fund

## Application Preference Items

- Applicant/applicant partner has obtained all applicable permits required to implement the project;
- Applicant/applicant partner have secured borrowing authorization;
- Applicant's (and partner's, if any) commitment to project implementation through direct contribution of funds and/or in-kind support;
- Applicant has proven capacity to implement the project;
- Applicant is credit worthy and not prone to default;
- Project budget is viable for the objectives proposed;
- Structure is in a community with an environmental justice population;





# Dam and Seawall Repair or Removal Fund

## Lessons from last application round:

**Resumes! - Resumes of key persons required**

**Only one structure per application – the exception to this rule would be a single water body managed by multiple structures.**

**Supplier Diversity Program – SDP form no longer required**

**Revised application schedule**





# Dam and Seawall Repair or Removal Fund

**Late March or Early April:** Request for Responses posted – Application Period Opens  
Mass CommBuys

EEA website: [www.mass.gov/green](http://www.mass.gov/green)

**Approx. June 17:** RFR Closes – Application Period Closes





# Dam and Seawall Repair or Removal Fund

## For Structures with High Public Safety Need

- Completion restores structure to DCR Dam Safety Compliance
- Design anticipates needs due to Climate Change Resiliency
- Structure is part of Water Supply System
- Develop an Operations and Maintenance Plan – (approved by DCR Office of Dam Safety)





# Dam and Seawall Repair or Removal Fund

## Coastal Infrastructure

- Completion restores structure to Safety Compliance
- Design anticipates needs due to Climate Change Resiliency
- Develop an Operations and Maintenance Plan –  
(approved by DCR Office of Waterways - FEMA)





# Dam and Seawall Repair or Removal Fund

The majority of the habitat restoration comes from removing the dam

Water quality, flow regime, connectivity, complexity

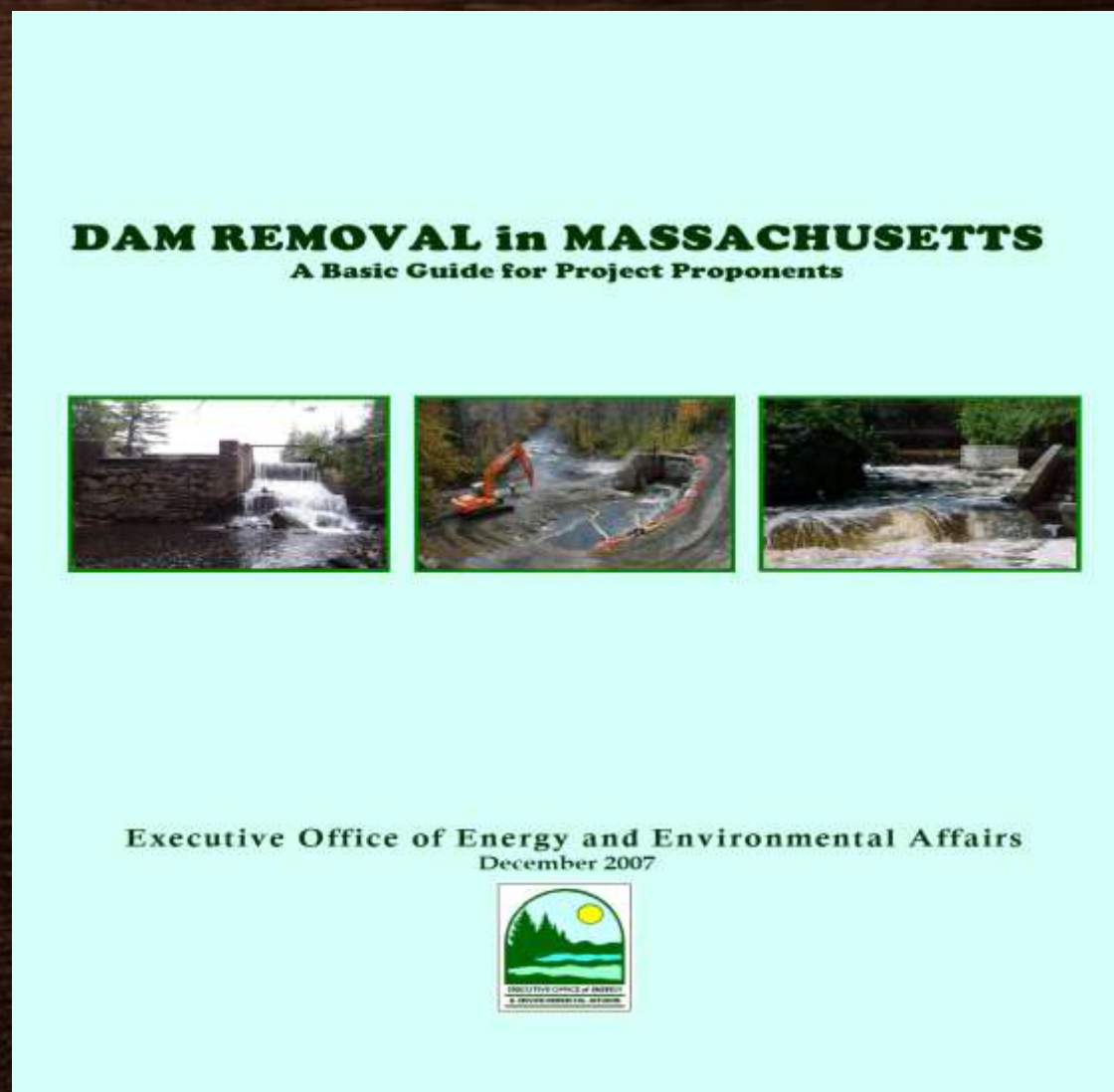
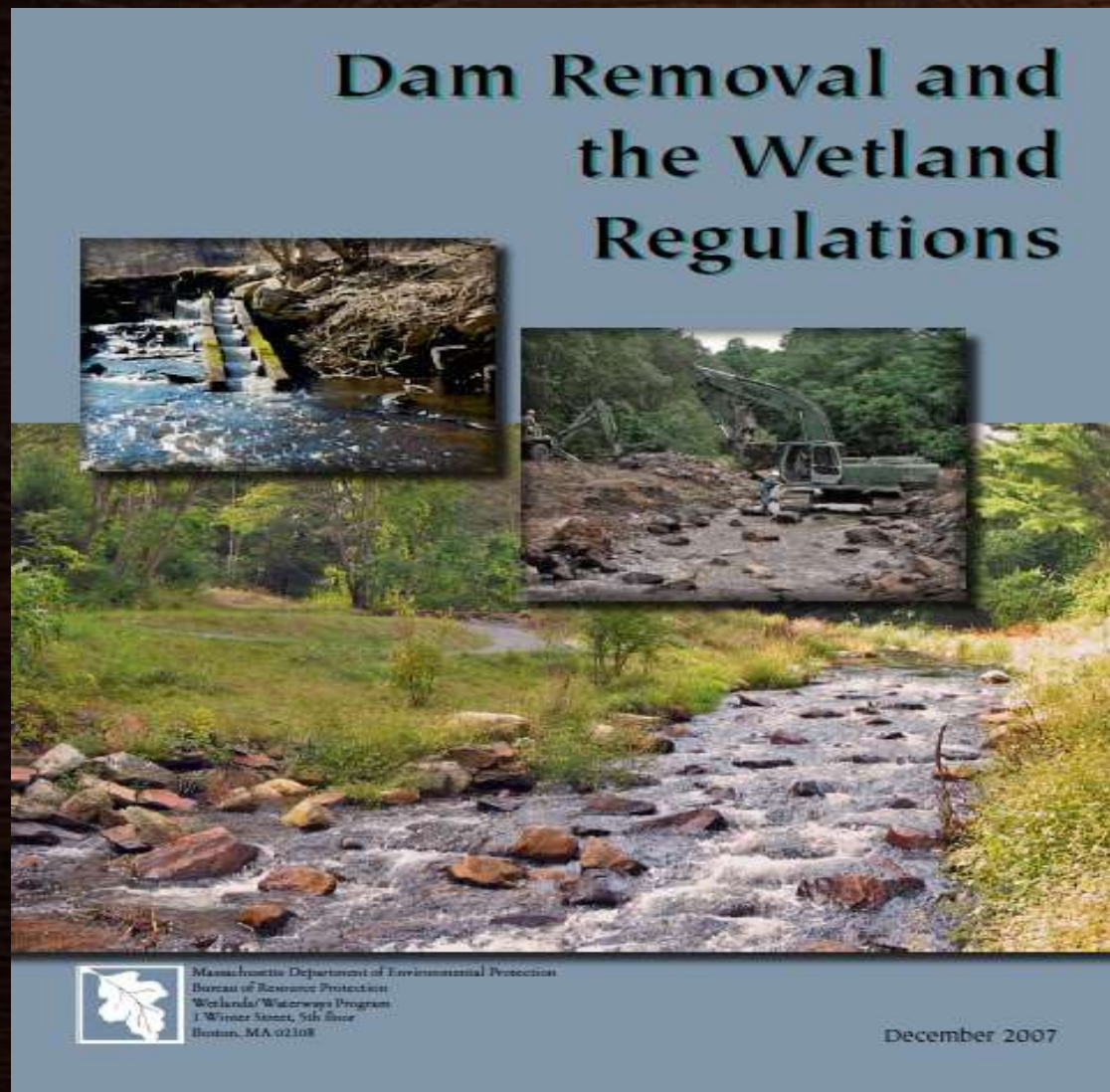
- Restored fish passage
- Restored connectivity along bed, banks, riparian area
- Temperature regime improvement (and associated dissolved oxygen)
- Restored riverine flow characteristics
- Restored sediment dynamics
- Cleaned substrate
- Restored vegetative cover long-term
- Restored riverine bed features long-term

Dam removal sets river on a trajectory to restore long-term habitat if given freedom to do its own work



# Dam and Seawall Repair or Removal Fund

Use existing guidance where applicable





## Dam and Seawall Repair or Removal Fund

# Thank You and Good Luck!

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